# SPECIFICATION for: Multi-year contract to install custom bodies and miscellaneous auxiliary equipment on City of Seattle supplied vehicles.

Project:

# 0503

Specification

prepared by:

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# • IMPORTANT •

Complete response to each item is required, responses must be written on this form, even if "No Bid" is the response. Attach any information necessary to explain or clarify your bid. Bids failing to include specific responses may be rejected. Evaluation will be based on compliance with specifications. Non-compliant items must be clearly indicated. Any mandatory items (marked "shall", "minimum" or "maximum") must be in compliance or the bid will be rejected. Acceptable abbreviations for use on this form: Standard = (STD), Not Available = (N/A), No Charge = (NC), Comply = (CPL), No Bid = (NB). All items described by attachments or addendum shall be referenced on the submitted bid in proper numerical sequence. You are encouraged to list and price any options that you feel would enhance the use of this item and/or would be desirable.

## SCOPE:

It is the intent of these specifications to establish the minimum requirements to install a variety of equipment and misc. bodies on the City of Seattle supplied vehicles and truck chassis. This will be a five (5) year contract with up to three (3) optional one (1) year extensions.

This multi-vendor contract also establishes a vendor pool that will be utilized to provide quotes on certain specialty up-fitting projects not covered in the following specifications.

#### **GENERAL DESCRIPTION:**

- Bidders are encouraged to offer options in their bid. Cost differences and alternatives should be detailed and completely defined on the bid.
- A performance demonstration may be required prior to bid award.

- All components shall be new, unused, up-to-date models and shall be delivered ready for service. Each unit shall include all inspection coupons and warranty identification cards furnished to general trade. All extended warranty months and miles shall be clearly noted on a placard installed in the vehicle.
- All components and accessories cataloged as standard, unless superseded by these specifications, shall be provided with the unit.
- In the event of a conflict between the specifications requirements and federal or state laws, the federal or state laws shall prevail.
- 6. Filters shall be easily accessible and replaceable without removing or disconnecting other components. If necessary filters may be remotely mounted to meet this requirement. Spin-on filters are required for fluid service unless specified otherwise or approved by the Automotive Engineer. All filters shall be heavy-duty and sized for severe service.
- Hose, wire and tube routing shall not impede normal maintenance and adjustment of the unit. Hoses, wires and tubes shall be securely and neatly positioned and secured with non-corrosive clamps.
- 8. On all items that the bidder is requesting Automotive Engineer equivalent approval, the part number, model, description and performance data (if applicable) of the alternative must be provided. The term "Automotive Engineer" means the Fleets and Facilities Department, Fleet Services Division, Automotive Engineer who is assigned to the individual project(s), or alternately, the Fleet Services Fleet Administration Manager. All such approvals shall be in writing.

# Vehicle Configurations:

The following vehicle categories will represent typical equipment (vehicles) the City of Seattle will supply for this contract. These configurations represent common types of vehicles/chassis the City of Seattle currently outfits. Vehicle models available/manufactured will change from year to year. The following are a good reference for calculating your bids:

- 1. Compact Cars
  - a. Dodge Neon
  - b. Chevrolet Cavalier
  - c. Ford Focus

## 2. Midsize Cars

- a. Toyota Prius
- b. Chervolet Malibu/Impala
- c. Dodge Stratus
- d. Ford Taurus

# 3. Full Size Cars

a. Ford Crown Victoria

# 4. Compact SUV

- a. Ford Freestyle
- b. Jeep liberty
- c. Chevrolet Tracker

# 5. Midsize SUV

- a. Dodge Durango
- b. Ford Explorer
- c. Ford Escape
- d. Ford Expedition
- e. Chevrolet Blazer and/or Trailblazer
- f. GMC Envoy

# 6. Large SUV

- a. Ford Excursion
- b. Chevrolet Tahoe and/or Suburban
- c. GMC Yukon

# 7. Compact Pickups

- a. Dodge Dakota
- b. Ford Ranger
- c. Chevrolet Colorado
- d. GMC Canyon

## 8. Full Size Pickups

- a. Ford Superduty F250 thru F350 both 2WD and 4WD
- b. Chevrolet/GMC HD2500/HD3500 both 2WD and 4WD
- c. Dodge Ram 2500/3500 both 2WD and 4WD

# 9. Passenger Mini-Vans

- a. Chevrolet Venture
- b. Dodge/Chrysler Caravan
- c. Ford Freestar

# 10. Passenger Full Size Vans

- a. Chevrolet Express
- b. GMC Savana
- c. Ford E-Series Wagon
- d. Dodge or Freightliner Sprinter

# 11. Cargo Mini-Vans

a. Chevrolet Venture

- b. Ford Freestar
- c. Dodge/Chrylser Caravan

# 12. Cargo Full Size Vans

- a. Chevrolet Express
- b. GMC Savana
- c. Ford E-Series Wagon
- d. Dodge or Freightliner Sprinter

#### 13. Cab Chassis

- a. Ford Superduty F350 thru F550 both 2WD and 4x4
- b. Chevrolet/GMC HD2500/HD3500 both 2WD and 4x4
- c. Topkick C4500 THRU C5500
- d. GMC W3500 THRU W5500HD Cab-Over/Chassis

# 14. HD/Medium Duty Trucks

- a. Ford F-650/F750
- b. Topkick C6500 thru C8500
- c. GMC T6500 THRU T8500 Cab-Over/Chassis
- d. Peterbilt class 6 & 7 Conventional Cab/Chassis
- e. Kenworth class 6 & 7 Conventional Cab/Chassis

A pre-bid meeting will be scheduled. Any questions and/or approved equal specifications may be addressed at this meeting. Bring all your questions and they will either be answered at the meeting and/or the following addendum. All questions, clarifications and correspondence must be addressed to the City of Seattle's purchasing agent Sara Schutt, who can be reached at 206-684-0456 or by E-Mail sara.schutt@seattle.gov . The City of Seattle Automotive Engineer Rick Haggard will not answer any direct questions except at the pre-bid meeting once the bid specification is posted in accordance with the City of Seattle's purchasing policy.

State Hourly Shop Labor Rate: \$72.00

Bid <u>pricing shall include installation</u>, <u>misc. parts</u>, <u>bolts</u>, <u>wiring</u>, <u>connectors etc. unless otherwise noted in this specification</u>.

#### 1 ELECTRICAL

# 1.1 Wiring Standards:

See Attachment #1. Any deviation from this must be Automotive Engineer Approved.

# 1.2 Body Lighting:

- 1.2.1 Fabricated body Lighting (See attachment #2) The base lighting standards shall be as follows, any deviation from this must be Automotive Engineer Approved equivalent.
- 1.2.2 All lights and reflectors required by DOT, ICC, FMVSS 108 standards and Chapter 46.37 of the Revised Code of Washington shall be furnished.
- 1.2.3 Truck-Lite sealed lighting system installation is required. The following is the base configuration:
  - Installation shall include Truck-Lite series 50 wiring harness with Truck-Lite #50400 junction box or boxes
  - Truck-Lite Ultra-FlashII LED flasher may be required to achieve proper flash rate. In line resistors are not acceptable.
  - Rear Stop/Tail lights, quantity two (2), shall be red LED Truck-Lite, Diamond Shell, 4" Super 44 series.
  - d. The rear turn lights, quantity two (2), shall be amber LED Truck-Lite, Diamond Shell, 4" Super 44 series.
  - e. The backup lights, quantity two (2), shall be clear LED Truck-Lite, Diamond Shell, 4" Super 44 series
  - All rear STT lights shall be flange mounted with tamper proof hardware and protected against damage.
  - g. All rear lights shall be protected with protective eyebrows.
  - Rear identification lights "Truck-Lite" model 35 identification lightbar #35740R.
  - One (1) LED license plate light "Truck-Lite" LED model 15.
  - All clearance lights are to be Truck-Lite LED Model 35 Diamond shell.
- 1.2.4 From attachment #2 misc. body lighting layouts give pricing for this base lighting package (1.0 thru 1.4) installed on the in the following configurations 7,8,13 and 14.

a.	Flatbed	Configuration #7	\$ NB
		Configuration #8	\$ NB
		Configuration #13	\$ NB
		Configuration #14	\$ NB
b.	Dump body	Configuration #7	\$ NB
		Configuration #8	\$ NB
		Configuration #13	\$ NB
		Configuration #14	\$ NB

	C.	Service body	5510.00 8 8743.00 611762.00
1.3	Lig	MANY OTHER WHEELBASES & CONFIGURATIONS AVA htbars:	VILABLE
1.3.1	Sea.	deral Signal Vista and Highlighters are the City of attle's standard light bars.  All lightbar wiring when installed on a cab guard shall travel thru the cab guard aluminum tubing for protection. The lightbar harness shall be isolated from sharp edges with rubber grommets. For all other wire routing refer to the wiring standards in attachment #1 for proper installation requirements.	
1.3.2	Vis "W refe foll a.	iote price to install one (1) "Federal Signal" 53" sta lightbar #581016-00063 to include the required firedRite" switch and/or switch panel (as erenced in the wiring standards) mounted as ows:  Price light bar mounted on top of a ProTech cab guard  Price with cab mounting in lieu of cab guard mounting.	
1.3.3	ligh Pricor mo ind a.	note price to install one (1) "Federal Signal" 53" Vista in the standard signal masters. The standard signal master in the sta	
1.3.4	Vis	ote price to install one (1) "Federal Signal" 53" sta lightbar #581016-00056 with a single rear nal master. Price to include one (1) #330102	
	sig cat det	nal master controller mounted in the cab. Exact in controller mounting location will need to be termined on an individual vehicle installation basis  Price light bar mounted on top of a ProTech	¢ ND
	b.	cab guard	
		IIIOUIIL	שואט ש

1.3.5	Quote price to install above (1.3.2, 1.3.3, and 1.3.4) with a City of Seattle supplied lightbar (labor only).		
	,	1.3.2a \$ 1.3.2b \$	288.00 288.00
			288.00
		1.3.3b \$	
		1.3.4a \$ 1.3.4b \$	288.00
		1.5.70 ψ	200.00
1.3.6	Quote price to install one (1) "Federal Signal"		
	Highlighter #453201 dual strobe light centered on		
	ProTech cab guard to include the required  "WiredRite" switch or switch panel	9	601.00
	a. Price with cab mounting in lieu of cab guard		001.00
	mounting		601.00
137	"Betts" work lights activated via a required		
1.3.7	"WiredRite" switch or switch panel.		
	a. One (1) ea. 325010 Incandescent Flood		
	work light installed on cab guard	\$	431.00
	b. One (1) ea. 325012 Incandescent Spot work light installed on cab guard	q	431.00
	installed on cab guard		401.00
1.3.8	Unity" 6" spotlight, vehicle door/pillar mounted		
	a. Right - one (1) each:(curb side)		
	b. Left - one (1) each:(road side)		254.00
1.3.9	Provide a complete "Federal Signal" Emergency		
	lighting (Amber) product line price list with discounts		
	offered. (Example: Manufacturer list price minus 40%, Jobber minus 20% etc.) A new price list will		
	need to be added as an addendum to this contract		
	for all pricing changes. (Parts Only - No Labor)		
1.4	Misc. Electrical:		
0 10 10			
1.4.1	Preco "Smart Alarm" Backup alarm installed		
	a. When the switch to over the back-up alaim		p 203.10
1.4.2	Auxiliary batteries -Two (2) 750 CCA, 12 Volt,		
	AGM Drycell batteries installed (Optima, Odyssey,		
	Concord) or Automotive Engineer approved equivalent. Install per attached electrical standards		3
	(Attachment #1).	\$	NB
	0 (4) 0 1 11 1 1 175000		
1.4.3	One (1) Cole Hersee" #75908 master battery disconnect switch (or Automotive Engineer		10
	approved equivalent) installed at or near the		
	battery box. Location shall be Automotive		
	Engineer approved		S NB

#### 1.5 INVERTERS:

- a. All DC to AC inverters supplied shall be Dimensions Unlimited Inc. power inverters purchased under the City of Seattle's "Private Label Program".
- Attachment #3 supplies a Dimensions distributor authorization application form.
- All inverter installation pricing shall include required AGM batteries as called out in wiring standards in attachment #1.
- d. If the auto-throttle can not be controlled via the engines power control module (PCM) a "Vanner" #73-46 auto throttle, #73-48 toggle switch and #70-VG low voltage regulator will be installed. (or Automotive Engineer Approved Equal). An emergency brake lockout switch shall be installed to prevent high idle activation when vehicle is placed into gear. Auto throttle is to be installed per attachment #1 "Wiring Standards"
- e. The City of Seattle participates in the "Dimensions Unlimited" Private Label program. As part of this program Dimensions Unlimited will accept orders direct from the City of Seattle or any up fitter authorized by the City of Seattle. All City of Seattle inverters are required to be purchased under this program. A custom label with an individual tracking number will be attached to all inverters under this program specifically for the City of Seattle.
- f. Please refer to Attachment #3. I have included the Authorized Distributor Plan Form along with the City of Seattle's current "Advance Replacement" warranty statement.
- 1.5.1 Pricing to install the following Dimension Millennium series Quasi-sine wave power inverters per section 1.5 and attachment #1 wiring specifications:

1.5	and attachment #1 willing specifications.		
a.	#12x16U 1,600 Watt inverter	.\$	NB
b.	#12x20U 2,000 Watt inverter	.\$	NB
C.	#12x25U 2,500 Watt inverter	\$	NB
d	#12×30113 000 Watt inverter	\$	NR

	e. Battery charger "B3" option
1.5.2	Pricing to install the following Dimension Millennium series Pure-sine wave power inverters per section 1.5 and attachment #1 wiring specifications: a. #DUI-12/400N 400 Watt Pure sine wave inverter. \$ NB
	b. #DUI-12/800N 800 Watt Pure sine wave inverter\$ NB
	c. #DUI-12/1200N 1,200 Watt Pure sine wave inverter
	d. Transfer Relay "T" option
1.5.3	Price to install one (1) each Hubbell" duplex marine receptacle located curbside in a marine weather tight receptacle box
2.	CARGO VAN INTERIORS:
2.1	Expanded mesh screen partition behind driver and passenger, State model offered. WEATHER QUARCE a. Full size van, standard one piece partition, solid base with mesh upper. \$366.40
	<ul><li>b. Full size van with walk thru door option\$ 467.20</li><li>c. Mini van, standard one piece, solid base with</li></ul>
	d. Mini van with one piece lexan partition behind
	driver and passenger. \$397.60  e. Sprinter van high roof solid base with expanded mesh upper, with center door. \$502.50
2.2	Recycled rubber area mats, 1/8" thick.
2.2	a. Front, two each standard van
	e. Rear Sprinter cargo van, full cargo area\$ 248.10 f. Rear, mini cargo van, full cargo area\$ 122.00

2.3 Provide an complete product line price list with discounts offered, (Example: Manufacturer list price minus 40%, Jobber minus 20% etc.) A new price list will need to be added as an addendum to this contract for all pricing changes. The local distributor is

# 2.3.1 Quote price (parts and labor) to install van packages and accessories as follows:

2.3.2	Mini cargo van		
2.0.2		\$	NR
		\$	
		\$	
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		\$	
	[일본 : ] : [ : 12 전 시간	\$	
		\$	
		\$	
		\$	NR
2.3.3	Full size cargo		
	그렇게 하나 되면 하는 아이를 하는 것이 되어 있다. 그렇게 되었다면 한 것	\$	
		\$	
		\$	
	Package #2253	\$	NB
	Package #2255	\$	NB
	Package #2256	\$	NB
	Package #2257	\$	NB
	Package #2258	\$	NB
	Package #2259	\$	NB
		\$	
	Package #2262	\$	NB
	Package #2940	\$	NB
	Package #2941	\$	NB
		\$	
	Package #2945	\$	NB
	[ ] [ ] - ( ) - ( ) [ ] - ( ) [ ] - ( ) [ ( ) ] - ( ) [ (	\$	
		\$	NB
2.3.4	<b>Sprinter Cargo</b>	Van	
	Package #3074	\$	NB
		\$	
	Package #3085	\$	NB
		\$	
		\$	
		\$	
		\$	
		\$	
		\$	
		·	
2.3.5	Walk in "Cube"	Style Cargo Van	
		\$	NR
		\$	
		\$	
	I achade #2000		ND

	Package #2531\$	
	Package #2532\$	
	Package #2533\$	NB
2.3.6	Misc. "Adrian" Up-fitting Products	
	a. TA1 hooks\$	
	b. PA7 emergency triangle holder\$	
	c. PA9 first aid box tray\$	
	d. PA11 Cab file box\$	
	e. DDF7 Driver data file\$	
	f. DDF12 Driver data file\$	
	g. BH4 four slot binder holder\$	
	h. CB5 five slot literature holder\$	
	i. CB7 seven slot literature holder\$	NB
	j. CB2 two book file\$	NB
	k. CB3 Three Book file\$	NB
	CB4 utility storage box\$	NB
	m. SA10 stow all\$	NB
8	n. SA20 stow all\$	NB
	o. SA30 stow all\$	NB
	p. SA 40 stow all\$	NB
	q. SAJ 10 shallow stow all\$	NB
	r. SAJ 20 shallow stow all\$	NB
	s. SAJ 30 shallow stow all\$	NB
	t. SAJ 40 shallow stow all\$	NB
	u. UH50 5" hook\$	
-	v. UH25 2.5" hook\$	
	w. WRH5 five bar wire reel holder\$	
	and come and the property of the second commencer and the second comment of the second comments of the second comm	
2.4	Provide a "System Edstrom" complete product line	
	price list with discounts offered. (Example:	
	Manufacturer list price minus 40%, Jobber minus	
	20% etc.) A new price list will need to be added as	
	an addendum to this contract for all pricing changes.	
	The local distributor is "NELSON TRUCK	
	EQUIPMENT Inc." JOBBER -10%	
2.5	+ labor, + shipping	
2.4.1	Quote price (parts and labor) to install "System	
	Edstrom"" van packages and accessories with ball	
¥	bearing drawers as follows:	
		19
2.4.2	Cargo Van Cabinet Packages	
	Package #SE1001\$	643.96
	Package #SE1002\$	
	Package #SE1003\$	
	Package #SE1104\$	
	Package #SE1005\$	
	Package #SE1006\$	

# ITEMS REQUIRED

Package #SE1007	\$ 843.95
Package #SE1008	
Package #SE1009	\$ 825.56
Package #SE1010	
Package #SE1011	
Package #SE1012	
Package #SE1013	
Package #SE1014	
Package #SE1015	
Package #SE1016	
Package #SE1017	
Package #SE1018	
Package #SE1019	
Package #SE1020.	
Package #SE1021	
Package #SE1030	
Package #SE1031	
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Package #SE1038	
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Package #SE1040	경험 및 전환원 제공 전략적인 기업
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Package #SE1102	
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Package #SE1106	\$ 100 <del>4</del> .79
Package #SE1100	
Package #SE1107	
Package #SE1109	\$ 1220.62
Package #SE1110.	
Package #SE11101	•
Package #SE11102	
Package #SE11103	
Package #SE11104	
Package #SE11105	
Package #SE1111	
Package #SE1112	
Package #SE2001	\$ 100.04 \$ 516.66

Package #SE2003		
Package #SE2004	.\$	705.35
Package #SE2005	.\$	1203.49
Package #SE2006	.\$	1215.86
Package #SE2007	.\$	1537.97
Package #SE2008	.\$	1176.49
Package #SE2009		
Package #SE2010	.\$	1322.18
Package #SE2011	.\$	1622.42
Package #SE2012	.\$	715.30
Package #SE2019	.\$	1333.62
Package #SE2020		1746.52
Package #SE2021	\$	1393.78
Package #SE2022		1746.52
Package #SE2023	.\$	1186.24
Package #SE2024	\$	1633.87
Package #SE2025	\$	2287.84
Package #SE2026		1621.42
Package #SE2027	\$	2287.84
Package #SE2029	\$	1353.21
Package #SE2030		2112.58
Package #SE2031		
Package #SE2032	\$	924.61
Package #SE2033		1660.46
Package #SE2034		1958.38
Package #SE2035		1154.42
Package #SE2036		866.67
Package #SE2037		1367.53
Package #SE2038.		832.94
Package #SE2039	.\$	872.22
Package #SE2040		806.99
Package #SE2041		1569.22
Package #SE2042		1108.43
Package #SE2043		
Package #SE2044	.\$	996.08
Package #SE2045		1209.13
Package #SE2046		
Package #SE2047		
Package #SE2048		
Package #SE2049		
Package #SE2050		
Package #SE2051		
Package #SE2052		
Package #SE2053		996.08
Package #SE2101	\$	767.12
Package #SE2102		
Package #SE2103		
Package #SE2104		832.82
Package #SE2105		1340.26
Package #SE2106		1681.28

Package #SE2107\$	
Package #SE2108\$	1518.41
Package #SE2109\$	
Package #SE2110\$	1239.59
Package #SE2111\$	1158.97
Package #SE2112\$	893.22
Package #SE2113\$	912.50
Package #SE2114\$	1697.13
Package #SE2115\$	1613.66
Package#SE2116\$	1752.03
Package #SE2117\$	1561.76
Package #SE2118\$	1171.25
Package #SE2119\$	1415.88
Package #SE2120\$	1566.19
Package #SE2121\$	1260.11
Package #SE2122\$	1195.58
Package #SE2123\$	784.98
Package #SE2124\$	480.18
Package #SE2125\$	1645.28
Package #SE2126\$	N/A
Package #SE2127\$	1274.58
Package #SE2128\$	1514.27
Package #SE2129\$	1102.38
Package #SE2130\$	1413.95
Package #SE2131\$	N/A
Package #SE2132\$	
Package #SE2132\$ Package #SE2133\$ Package #SE2134\$	N/A
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# ITEMS REQUIRED

Package #SE	2174	\$	1948.46
Package #SE	2175	\$	1449.72
Package #SE	2176	\$	1645.22
Package #SE	2177	\$	1249.62
Package #SE	23330	\$	2291.04
Package #SE	23331	\$	1814.80
Package #SE	23332	\$	2298.30
		\$	
Package #SE	23334	\$	1958.95
Package #SE	.23335	\$	846.61
Package #SE	23336	\$	2026.42
Package #SE	23337	\$	1760.30
Package #SE	23338	\$	2533.23
Package #SE	23339	\$	1358.68
Package #SE	23340	\$	1949.90
Package #SE	23341	\$	1301.88
Package #SE	23342	\$	2490.59
Package #SE	23343	\$	2263.81
Package #SE	23368	\$	1335.82
Package #SE	23369	\$	836.12
Package #SE	23370	\$	1571.12
Package #SE	23371	\$	722.48
Package #SE	23372	\$	1453.71
Package #SE	23373	\$	1149.03
Package #SE	23374	\$	1997.02
Package #SE	23375	\$	1186.15
Package #SE	23376	\$	1639.18
Package #SE	23377	\$	782.21
Package #SE	23378	\$	1667.53
Package #SE	23379	\$	763.17
Package #SE	23380	\$	2658.07
Package #SE	23381	\$	2977.60
Package #SE	23382	\$	2193.36
Package #SE	23383	\$	1290.62
		\$	
Package #SE	23385	\$	1770.05
		\$	
Package #SE	23387	\$	1541.55
Package #SE	23388	\$	2392.63
		\$	
Package #SE	23390	\$	2503.78
Package #SE	23391	\$	1913.70
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	Package #SE3100       \$         Package #SE3101       \$         Package #SE3102       \$         Package #SE3103       \$         Package #SE3104       \$         Package #SE3106       \$         Package #SE3107       \$         Package #SE3108       \$         Package #SE3110       \$         Package #SE3111       \$         Package #SE3112       \$         Package #SE3113       \$         Package #SE3114       \$         Package #SE3115       \$	3462.06 1224.63 3914.62 1788.53 1628.02 1564.86 1788.34 2631.65 2642.44 4145.23 1492.17 2405.84 1492.27
2.5	Provide a "Weather Guard" complete product line price list with discounts offered. (Example: Manufacturer list price minus 40%, Jobber minus 20% etc.) A new price list will need to be added as an addendum to this contract for all pricing changes. The local distributor is "Nelson Truck"	
	14325 Aurora Ave N JOBBER – 17.5% Seattle, WA 98133 + labor + shipping (206) 365-1000	
2.6	Cargo Van Exterior:	
2.6.1	Quote price for a full width, approximately 8" deep step bumper with diamond tread\$	N/A
2.6.2	Quote price for ladder rack "Adrian" #VP-1 cargo rack with #RR-5 roller and two (2) #RS-4 ratcheting straps on each side\$	NB
2.6.3	Quote price for ladder rack "Adrian" #VP-2 cargo rack with two (2) #RS-4 ratcheting straps on each side\$	NB
2.6.4	Quote price for ladder rack with dual (two) "Weather Guard" "EZ-Glide" ladder drop down systems on the	
	following vans:  a. Sprinter cargo van#280 + 286	1838.40
	conduit Carrier Kit with mounting plate\$	203.60

2.6.5	Quote price for ladder rack with single (one) "Weather Guard" "EZ-Glide" ladder drop down system.  a. Sprinter cargo van
2.6.6	Install "Western Mule" V – series bumper crane with one group 31 drycell battery and isolation relay as called out in attachment #1 "Electrical Standards" on the following vehicle configurations (Pages 3 & 4):  a. Configuration #7
3.0	PICKUP TRUCK UPFITTING:
3.1	Bedliner - Bedliner material such as "Armor Coat" or Automotive Engineer approved equal for the following applications installed over the rail both truck bed and tailgate. a. Shortbed compact pickup
3.2	Cab Guard - "Protech" Cab guards are the current standard for the city. Quote installed pricing for the following applications:  a. Compact pickup base cab guard Protech # 57-6230-24 for configuration #7
3.3	Provide a "ProTech" complete product line price list with discounts offered. (Example: Manufacturer list

price minus 40%, Jobber minus 20% etc.) A new price list will need to be added as an addendum to

this contract	ct for all pricing changes. The local
distributor i	s "ProTech Industries" in Vancouver
Washingto	on. Contact person Don Hart @ 1-800-
443-6153	Jobber – 12% + labor

- 3.3.1 Provide a "Highway Products" complete product line price list with discounts offered. (Example: Manufacturer list price minus 40%, Jobber minus 20% etc.) A new price list will need to be added as an addendum to this contract for all pricing changes. There are several local vendors for this product.
- Adrian Steel "Load Runner Rack" Steel truck rack 3.4 with Three (3) ratcheting "Ratchet Strap" #RS-3 tie downs curbside of rack installed on the following truck configurations:

a.	Full size pickup truck with 8 foot bed\$	NR
b.	Full size pickup truck with 6 foot bed\$	NB
C.	Optional WG21 window guard in black for	
	standard pickups\$	NB
4	Ontional MC215 window guard in block for	

 d. Optional WG21S window guard in black for Ford Super Duty pickups......\$ NB

3.5 One (1) each front bumper hoop style cone holder in aluminum, approximately 1/2" diameter aluminum tubing and 1/4" thick aluminum mounting bracket. Fasten to front bumper with minimum grade #5, 3/8" plated corrosion resistant SAE bolts, self locking nyloc nuts with flat washers. Hoop inside diameter 

#### 3.6 **CROSS BOXES**

- 3.6.1 Aluminum cross box to be either Highway or ProTech (or Automotive Engineer approved equal) equipped with:
  - a. Gull wing locking doors all keyed alike
  - b. Stainless steel T-latches
- 3.6.2 For the following configurations

C.	Compact pickup	PROTECH	\$ 600.40 installed
		PROTECH	\$ 600.40 installed

3.6.3 Same as 3.4.1 with painted steel in lieu of aluminum.

a.	Compact pickup	<i>DELTA</i>	.\$	548.26 installed
			-	E00 00 ' 1 11 1

b. Full size pickup...... WEATHER GUARD ...\$ 569.60 installed

Same as 3.4.1 with stainless steel in lieu of aluminum.  a. Compact pickupPRO TECH\$ 2000.00  b. Full size pickupPRO TECH\$ 2110.00
EZ DUMPER ELECTRIC/HYDRAULIC DUMP BED INSERT:
Quote price to install EZ Dumper Model #EZ 0012T and #EX0012TSB on category #8 pickup trucks.  a. #EZ 0012T on 8 foot truck bed
Quote price to remove truck bed and mount EZ  Dumper directly on chassis frame to include lighting as called out in section 1.2. a. #EZ 0012TWITH PROTECH FENDERS \$ 3657.00 b. #EX0012TSBWITH PROTECH FENDERS \$ 3652.00
Price options as follows:  a. Deluxe cab protector \$555.00  b. Tarp roller kit \$580.00  c. Custom colors \$828.00  d. Stainless steel dump body \$4136.00
CANOPIES:
Install "Gemtop" Gemsport Commerical canopy to include:all standard features plus the following:  a. Canopy installation to include two (2) #80419  "Truck-Lite" dome lights activated with a combination WiredRite incab switch and a second toggle switch located curbside just inside rear canopy tailgate door. Two way light switching on/off control.  b. Canopy shall be painted to match chassis.  c. Fixed clear front window.  d. Canopy shall include locking lift up side access doors with dark tint windows and security screens.  e. All doors shall lock and be keyed alike. Five sets of keys shall be supplied with each canopy installed.
<ul> <li>include:all standard features plus the following:</li> <li>a. Canopy installation to include two (2) #80419 "Truck-Lite" dome lights activated with a combination WiredRite incab switch and a second toggle switch located curbside just inside rear canopy tailgate door. Two way light switching on/off control.</li> <li>b. Canopy shall be painted to match chassis.</li> <li>c. Fixed clear front window.</li> <li>d. Canopy shall include locking lift up side access doors with dark tint windows and security screens.</li> <li>e. All doors shall lock and be keyed alike. Five sets of keys shall be supplied with each canopy</li> </ul>

3.8.4	Pricing for canopy installed on short bed full-size pickup 6'
	bed\$ 2112.05
3.8.5	Pricing for canopy installed on regular bed full-size pickup 8' bed \$ 2112.05
3.8.6	Canopy Options as follows:  a. Lumber rack with three (3) each ratcheting tiedowns.  KARGO MASTER + RACK STRAPS
4.0	TRUCK CAB CHASSIS UPFITTING:
4.1	<ul> <li>Toolboxes: <ul> <li>a. Toolboxes shall have weather tight doors with top hinge and drip molding above hinge.</li> <li>b. Vertically opening doors shall have two gas struts and open a minimum of 150 degrees.</li> <li>c. Doors shall have continuous stainless hinges with 1/8" stainless pin. Hinges and latches shall be installed with rivets or machine screws only.</li> <li>d. Doors shall have stainless twist type lock, double striker, flush mount and all locks keyed alike.</li> <li>e. Full length shelf with 1" lip turned up in front. Locate shelf 6" from top of box.</li> <li>f. Toolboxes shall be fabricated from 1/8" x 1.76 lb./sq.ft. 5052 H32 aluminum sheet.</li> <li>g. Toolboxes shall include tapered rain gutters over the hinge.</li> <li>h. All tool boxes shall be protected from any cargo shifting and jamming of the linkage while doors are shut.</li> </ul> </li> </ul>
4.1.1	Pricing for the following size tool boxes frame mounted:       \$ NB         24L x 20D x 18T       \$ NB         30L x 20D x 18T       \$ NB         c. 36L x 20D x 18T       \$ NB         d. 42L x 20D x 18T       \$ NB         e. 48L x 20D x 18T       \$ NB

f. 56L x 20D x 18T.....\$ NB

b. Furnish 60 dividers loose.

c. Paint body to match cab, all surfaces. Paint

inside compartments silver/grav.

4.1.2	Pricing for the following size tool boxes deck mounted:       \$ NB         a. 24L x 20D x 18T       \$ NB         b. 30L x 20D x 18T       \$ NB         c. 36L x 20D x 18T       \$ NB         d. 42L x 20D x 18T       \$ NB         e. 48L x 20D x 18T       \$ NB         f. 56L x 20D x 18T       \$ NB
4.1.3	Pricing to install Armor Coat on all inside panels of each tool box.       \$ NB         a. 24L x 20D x 18T.       \$ NB         b. 30L x 20D x 18T.       \$ NB         c. 36L x 20D x 18T.       \$ NB         d. 42L x 20D x 18T.       \$ NB         e. 48L x 20D x 18T.       \$ NB         f. 56L x 20D x 18T.       \$ NB
	EZ DUMPER HYDRAULIC DUMP BED INSERT:
4.2.1	Quote price to install EZ Dumper Model #EZ 0012T and #EX0012TSB on category #13 pickup trucks.  a. #EZ 0012T on 8 foot truck bed
4.2.2	Quote price to remove truck bed and mount EZ  Dumper directly on chassis frame to include lighting
	as called out in section 1.2. a. #EZ 0012TINCLUDES PRO TECH FENDERS\$ 3657.00 b. #EX0012TSBINCLUDES PRO TECH FENDERS \$_3652.00
4.2.3	Price options as follows:  a. Deluxe cab protector
4.3	SERVICE BODY:
4.3.1	Service body installed similar to the KNAPHEIDE & STAHL with full width galvanized bumper, approximately 8" deep or Automotive Engineer approved equal.  a. All mounting hardware is required to be grade 8 minimum either zinc plated steel or stainless steel. Locking nuts are required, Split "lock" washers are not acceptable.

- d. Five (5) sets of keys for each body all locks keved alike
- e. DOT approved mud flaps shall be installed with anti-sail brackets.
- 4.3.2 Approved Equal Service Bodies:
  - a. Dakota body
  - b. Reading
  - c. Omaha
  - d. Koneia
  - e. Diamond
  - f. Royal
  - g. Knapheide
  - h. IMT
  - i. Monroe
  - Stahl
- 4.3.3 State Manufactures body(ies) offered KNAPHEIDE & STAHL
- 4.3.4 Give pricing for a standard service body installed on the following cab axle truck chassis.

a.	60" CA single rear wheelsFORD ONLY	\$ 5709.00
	60" CA dual rear wheelsGM add \$492.00	\$ 5904.00
	84" CA dual rear wheelsGM add \$492.00	\$ 6629.00

4.3.5 Low profile body

a.	60" CA single rear wheels	.FORD ONLY	\$ 6096.00
b.	60" CA dual rear wheels	GM add \$492.00	\$ 6291.00
C.	84" CA dual rear wheels	•	\$ N/A

4.3.6 Service Body Options - Price individually

	Tylce body Options - Price individually		920	N Brever Ing
	Four section sliding cover, includes tail gat		\$	1096.90
b.	Steel pipe rack with Three (3) ratcheting "F	Rack		
	Strap" tie downs curbside of body	1700#	\$	865.00
C.	"Rigid" pipe vise #40185	REED #CV2	\$	134.36
d.	"Rigid" Machinist's vise #90705, model 35			
	CPN	REED #304N	.\$	266.50

e. Mount vise on separate seamless 2"square tube inserts.....\$ 96.04

f. Mount 1/4" x 2" seamless square tube receiver curbside through rear step bumper.....\$ 98.23

g. Install twelve (12) "Truck Lite" #15205 LED model 15 lights inside all compartments. (Locations to be determined at construction, depending on the compartment layout). Compartment lights shall be activated via a 3 way switch system utilizing a "Wired Rite" switch on the dash (or Wired Rite switch panel) in conjunction with a water proof toggle switch accessed in the curbside rear service body compartment. ...... 1246.00

- h. Master lock bin securement system.....\$ 321.10
- 4.3.7. "Armor Coat" bedliner material (Or Automotive Engineer approved equal) installed on service body, application as follows:

LINE-X ..\$ 480.00

 Inside all tool boxes – Color to be light grey or white. Engineer will determine color when ordering...LINE-X..\$ 740.00

# 4.4 FLATBED:

Note: The following bodies are to be installed on cab/chassis with dual or single rear wheels, 10,000 lb. GVWR and larger with lighting installed per section 1.2.4a.

# 4.4.1 SUBFRAME:

- a. All mounting hardware is required to be grade 8 minimum either zinc plated steel or stainless steel. Locking nuts are required, Split "lock" washers are not acceptable.
- b. Longitudinals shall be 6" x 3 lb/ft. 6061-T6 aluminum channel, full body length.
- c. Crossmembers shall be 3" x 1.73 lb./ft. 6061-T6 aluminum channel interlaced through longitudinals on maximum 16" centers.
- d. Omit crossmembers over wheel area to provide lowest bed height and clearance for tires and chains with 2,000 lb. load on deck.
- e. Perimeter rail to be 4" x 2.16 lb./ft. 6061-T6 aluminum channel, flange outboard.
- Crossmembers shall be butt welded to perimeter.

# 4.4.2 FLATBED DECK:

- a. Deck shall be 1/4" x 3.9 lb./sq.ft. 6061-T6 aluminum plate, sheared to fit.
- All seams shall be welded full length and ground smooth.
- c. Deck shall be warp-free, no oil can deformations.
- d. Deck shall be sheared at rear to form 18" rear apron.
- e. Apron perimeter shall be reinforced with 3" x
   1.73 lb./ft. 6061-T6 aluminum channel;
   connections to longitudinals and perimeter frame is required.
- f. Recessed fuel filler neck.
- g. The apron shall be trapezoid sectioned. Apron shall include two (2) fully enclosed step pockets.

- exact location to be determined by the Automotive Engineer assigned to the project.
- Distance from ground to deck shall be identical, both sides.
- DOT approved mud flaps shall be installed with anti-sail brackets.
- j. All lighting shall either recessed and protected by eyebrows or just recessed in .5" without eyebrows. Mounting style shall be determined by the Automotive Engineer assigned to the project.

## 4.4.3 HEADBOARD:

- Cab height plus 2" trapezoid section headboard and full width expanded mesh (ProTech style mesh) window at cab window height.
- Frame shall be 2" x 2" x .125" 6063 T52 aluminum.
- Dash shall be 1/4", 3.9 lb./ sq. ft., 6061 T-6 aluminum.
- d. Minimum, five (5) vertical supports are required.
- 4.4.4 Quote pricing per specifications for the following length of flatbed lengths.

a.	Approximately 96" Long X 96" Wide\$	NB
b.	Approximately 120" Long X 96" Wide\$	NB

- c. Approximately 144" Long X 96" Wide...... NB
- 4.4.5 Alternative Aluminum Flatbed Subframe. Quote price increase/deduction for non interlaced cross members welded on top of longitudinals in lieu of interlaced crossmembers with the following specs.
  - a. Longitudinal 2"X6" rectangular aluminum tube, minimum .125" thickness
  - b. Crossmembers 2"X3" rectangular aluminum tubing, minimum .125" thickness on 16" centers
  - c. Quote price increase/deduction for an approximately 96" Long X 96" Wide flatbed.....\$ NB

## 4.4.6 FLATBED OPTIONS AS FOLLOWS:

- a. Four evenly spaced stake pockets shall be tapered to accept 3" x 1.5" aluminum channel stakes......\$ NB

		No. 1 fir sideboards and tailboard mounted to 3" x 1.5" alumimum channel stakes. Side board size is to be approximately 2" x 8". Sideboards shall have vertical angles at rear to accommodate tailboard	
4.5	an tru a.	uote price to install EZ Dumper Model #EZ0012T id #EX0012TSB on category #13 light duty flatbed ucks as called out under section 4. #EZ 0012T on flat bed	
4.5.1	a. b. c.	icing on the following options:  Deluxe cab protector	NB NB
4.6	a.	ght Duty 2 to 3 Cubic Yard Dump Bodies  One "Rugby" "Eliminator" series dump body (or Automotive Engineer approved equal) installed on a configuration #13 cab chassis Color shall either match the chassis or grey. Color to be determined when ordered. See paint section #10.	
	d. e. f. g. h.	Pricing shall include all required lighting in secton #1.2.  The dump body shall incorporate the optional 8 gauge floor.  The standard cab shield shall be the ¼ option.  The standard hoist shall be the Rugby HR-520.  The hydraulic system shall be designed as called out under the hydraulic specification in section #9  All mounting hardware shall be grade 8 minimum either zinc plated steel or stainless steel. Locking nuts are required, Split "lock" washers are not acceptable.	
	I.	Pricing shall include a trailer hitch and electrical connections to be installed as called out in section 6.  Brake controller section 6.3.9  Receiver insert section 6.3.4  Combination pintle/ball coupling section 6.3.3  DOT approved mud flaps shall be installed with anti-sail brackets.	

4.6.1 Quote price for dump body installed as called out in

	section 4.6 above a. Eight (8) foot body
4.6.2	Light Duty Dump Body Options  a. Quote price for ½ cab shield in lieu of ¼
5.0	LIFTGATES:
5.1	Give pricing to install "Tommy Gate" (or Automotive Engineer Approved Equal) liftgates on full size pickup trucks, flatbeds and service bodies in categories 8 and 13 as follows:  a. All mounting hardware shall be grade 8 minimum either zinc plated steel or stainless steel. Locking nuts are required, Split "lock" washers are not acceptable.  b. Install all wiring per manufactures recommendations and the City of Seattle's wiring standards per the "Wiring Standards for Fleet Services Vehicles" attachment #1.  c. Mount liftgates per manufactures installation instructions.  d. Liftgates shall not interfere with receiver hitch usage.  e. All tailgates are to be returned to the City of Seattle upon return of the vehicle.
5.1.1	Pickup Trucks  a. 500 Lb. lifting capacity on a standard 8' pickup box with the standard 12 ga. steel platform\$ N/A  b. 500 Lb. lifting capacity on a standard 8' pickup box with the 11" steel platform extensionTREADPLATE\$ 1720.00  c. 500 Lb. lifting capacity on a standard 8' pickup box with a treadplate platform\$ 1575.00  d. 500 Lb. lifting capacity on a standard 8' pickup box with an expanded metal (Grip Strut) mesh in

	lieu of standard steel platform. \$ 1690.00 e. 500 Lb. lifting capacity on a standard 8' pickup box with an extruded aluminum platform. \$ N/A f. 1000 Lb. rating same as 5.1.1a. \$ N/A g. 1000 Lb. rating same as 5.1.1b. TREADPLATE \$ 1752.30 h. 1000 Lb. rating same as 5.1.1c. \$ 1611.00 i. 1000 Lb. rating same as 5.1.1d. \$ 1732.00 j. 1000 Lb. rating same as 5.1.1e. \$ 1725.00 k. 1300 Lb. rating same as 5.1.1a. \$ N/A l. 1300 Lb. rating same as 5.1.1b. TREADPLATE \$ 1793.70 m. 1300 Lb. rating same as 5.1.1c. \$ 1652.40 n. 1300 Lb. rating same as 5.1.1d. \$ 1773.40 o. 1300 Lb. rating same as 5.1.1e. \$ 1766.40
5.1.2	Standard Service Bodies
	a. 500 Lb. lifting capacity on a standard 8' utility box with the standard 12 ga. steel platform\$ N/A
	b. 500 Lb. lifting capacity on a standard 8' utility box with the 11" steel platform extension
	c. 500 Lb. lifting capacity on a standard 8' utility box with a treadplate platform\$ N/A
	<ul> <li>d. 500 Lb. lifting capacity on a standard 8' utility box with an expanded metal (Grip Strut) mesh in</li> </ul>
	lieu of standard steel platform
	box with an extruded aluminum platform
	f. 1000 Lb. rating same as 5.1.2a
	g. 1000 Lb. rating same as 5.1.2b*
	h. 1000 Lb. rating same as 5.1.2c*
	i. 1000 Lb. rating same as 5.1.2d*
	k. 1300 Lb. rating same as 5.1.2a \$ N/A
	I. 1300 Lb. rating same as 5.1.2b*
	m. 1300 Lb. rating same as 5.1.2c*
	n. 1300 Lb. rating same as 5.1.2d. *\$ 1778.00
	o. 1300 Lb. rating same as 5.1.2e*
	* INDICATES THAT I NEED THE BOX WIDTH MEASUREMENT
6.0	TOWING HITCHES AND ELECTRICAL CONNECTORS:
6.1	This policy is designed for the safety of City of
	Seattle employees, Fleet Services employees and
	the general public. This policy applies to trailer
	towing by vans, pick-ups and light vans only, and
	does not apply to heavy equipment.
	a. The Fleet Services trailer hitch receiver standard

for equipment less than 20,000 lb GVWR will be the Draw-Tite Class IV Ultra Frame Receiver. This receiver shall have a two-inch (2"), square receiver tube opening. <u>SAE standards state that</u>

- the hitch rating has to be stamped on the receiver, and other specifications as follows:
- b. The weight carrying capacity (NOT weight distributing capacity), shall be tongue weight of 1,000 pounds, and trailer weight shall be 10,000 lb. Our goal is to have vendors and Fleet Services shops use this receiver as our standard.

# 6.2 Procedures

- 6.2.1 Hitch Receivers and Hitches on Towing Vehicles
  - Each receiver will accept a 2" ball, a pintle hitch or a combination 2" ball and pintle hitch. No 2 -5/16" ball hitches will be used.
  - b. Two D-rings will be installed for connecting safety chains. The D-rings will be welded to the hitch receiver or to the tow vehicle's structure. The D-rings will <u>not</u> be welded to the ball or pintle hitch. The D-rings will be attached at sufficient height to prevent the trailer tongue from striking the pavement in case it becomes disconnected.
  - c. All hitch related mounting hardware shall be grade 8 minimum either zinc plated steel or stainless steel. Locking nuts are required, Split "lock" washers are not acceptable.
- 6.3.1 Quote Pricing for the following installed:
  All ball/coupling devices shall be "Premier" brand or
  Automotive Engineer Approved Equal.

6.3.2	Draw-Tite Class IV Ultra Frame Receiver	
	a. Vehicle Configuration #6\$	390.69
	b. Vehicle Configuration #7N/A 10000 GTW\$	
	c. Vehicle Configuration #8\$	
	d. Vehicle Configuration #12\$	

e. Vehicle Configuration #13......\$ NB

6.3.3 "Premier" 150 Combination Coupling with a 2", "#155" ball..........\$ 149.00

6.3.4 "Premier" #165 Receiver insert......\$ 33.81

6.3.5 "Premier" #130 pintle hitch "coupling....... ....\$ 153.07

6.3.8	"Premier" #240 pintle hitch coupling\$ NB				
6.3.9	Electric brake controller "Tekonsha" Prodigy.VALLEY 52810 .\$ 174.34				
6.4	ELECTRICAL INTERFACE:				
6.4.1	Trailer and Towing Vehicle Connectors for Vehicle Configuration #6,7,8,12,13 & 14				
6.4.2	Each vehicle will have an SAE J560 and an ISO 3731 connector with designated auxiliary connections. The designated auxiliary connection schematics are included in attachment #1.  a. The "Wiring Standards for Fleet Services Vehicles" attachment #1 standards will be required.  b. The truck and trailer electrical 7 pin plugs shall be wired according to the drawings in attachment #1.  c. The drawings show the plugs as viewed from the rear of the receptacle.  d. The battery charge wire for the trailer shall be wired to the #4 pin on the ISO 3731 receptacle.  e. The electrical trailer brake signal wire shall be wired to the #7 wire of the J560 receptacle.  f. The charge circuit shall be protected with an ignition powered 20 Amp auto reset circuit breaker installed as closely to the battery as possible.  g. Some vehicles will come prewired from the factors with the fuse box supplying fused power.				
	factory with the fuse box supplying fused power for the trailer battery charge circuit, This acceptable only if OEM installed.				
6.4.3	Installed on Vehicle Configuration #6,7,8,10,12 &13 92.17 (Typically the charging circuit is OEM fuse powered)				
6.4.4	Installed on Vehicle Configuration #14				
	the battery as possible. The charging system will be ignition activated via a "Cole Hersee" # 24143 12V (or Automotive Engineer Approved Equal) constant duty isolation relay. See drawing included in attachment #1.				
7.0	WINCH:				

a. All winch related mounting hardware shall be grade 8 minimum either zinc plated steel or

stainless steel. Locking nuts are required, Split "lock" washers are not acceptable.

7.1	"Warn Industrial Electric Winch" or Automotive Engineer Approved Equal" Installed on Vehicle Configuration #7, 8, 13 & 14 per electrical specifications in attachment #1. a. 9,000 LB electric winch						
	<li>j. Wire rope options for each size 125', 3/8" (12000#)</li>	of winch (cross section and length) #15712 \$ 130.81					
	[1일 경험 기계 경영 :	#27110 \$ 10125					
	100', 5/16" (9000#)	#25987 \$ 123.94					
	125', 5/16" (9000#)	#25967 \$ 125.94 \$					
		Ψ					
7.2	"Warn Industrial Hydraulic Winch" Engineer Approved Equal. Installed specification hydraulic standards of section #9 (all winches are rated w maximums) a. 9,000 LB hydraulic winch b. 10,000 LB hydraulic winch c. 12,000 LB hydraulic winch d. 15,000 LB hydraulic winch e. Price for in cab controls f. Give options for in cab controls	d per applicable in pages 31-33 vith single line pull  SNB SNB SNB SNB SNB SNB SNB SNB					
		\$					
	g. Price for bumper kith. Price for 4 head roller fairleads. i. Price for cable tension kit j. Winch coverk. Wire rope options for each size	\$ NB\$ NB e of winch (cross section and length)\$ NB					
		*					
		<u></u>					

#### 8.0 WELDING PROCESS AND CONTROL:

- All welds shall meet AWS standards for structural steel joints.
- Porosity, penetration leg and throat sizes, heat affected zone, and splatter clean up will meet or exceed AWS requirements.
- All rough edges are to be ground smooth before painting.
- d. Dual shield welding process is preferred.
- Welding inspection is required by the Automotive engineer or a designated representative prior to delivery of the vehicle.

## 9.0 HYDRAULIC STANDARDS:

- 9.1 When ever possible "Chelsea™" (Parker) Hot Shift PTO model (sized for proper application) or Automotive Engineer approved equivalent shall be used to drive the hydraulic pump for the required functions.
- 9.2 "Parker™" hydraulic pump(s) (sized for proper application) or Automotive Engineer approved equivalent, shall supply hydraulic fluid at the proper pressure and volume to the entire system. The system shall be designed with a flooded pump suction. Vendor must supply required specifications and have Automotive Engineer Approval prior to installation.
- 9.3 As part of the City of Seattle's green fleet policy the Hydraulic fluid will be Chevron "Clarity" AW ISO 46 biodegradable oil, Chevron P/N 230341. The system must be tested at full system pressure. No leakage is allowed. A reflective decal stating "Use Chevron Clarity AW-46 Biodegradable Hydraulic Oil Only" will be installed on hydraulic tank viewable by anyone adding fluid to the reservoir. Chevron "Clarity" AW-32 may be used with Automotive Engineer Approval. Type and size of tag to be Automotive Engineer approved.
- 9.4 All hydraulic hoses shall be rated for suction or pressure according to the particular application. "Parker" Super Tough Cover or Automotive Engineer approved equivalent shall be used in all abrasive applications. All lines shall be sized for full flow resulting in a maximum suction line velocity of 4 feet per second, a maximum pressure

- line velocity of 20 feet per second and a maximum return line velocity of 10 feet per second.
- 9.5 Hydraulic hose fittings shall be the crimp fittings recommended by the manufacturer of the hose used.
- 9.6 Adapters for the high pressure lines shall be SAE 37 degree flare, SAE o-ring or split flange. Pipe thread is to be avoided on the pressure side of the system. Teflon tape is not allowed in the hydraulic system. Automotive Engineer approval is required for any pipe thread usage.
- 9.7 The system shall be designed to avoid heat. If reservoir temperatures exceed 160 degrees Fahrenheit during normal operation on an 80 degree day, the vendor shall add an oil cooler.
- 9.8 Hydraulic Reservoir
- 9.8.1 The reservoir shall be fabricated from (rule of thumb: steel min: 10 gal- 14 GA, 20 gal-12GA, 30 gal- 10 GA, 50 gal- 3/16"; alum min: 10 gal- 1/8", 30 gal- 3/16", 50 gal- ¼") GA minimum (mat'l: steel is our primary material, aluminum optional). The reservoir shall be fabricated using a minimum ¼ inch overlapping seam construction. It shall be designed to prevent aeration and cavitation with all cylinders fully extended. The reservoir shall be mounted above the chassis frame and shall not interfere with any part of the chassis cab. Any deviation from this mounting must be Automotive Engineer Approved prior to installation. The following items are required:
- 9.8.2 A minimum 24 square inch clean-out cover.
- 9.8.3 A filler breather shall be incorporated into the cover. The filler breather shall have a filtered air vent and a basket screen. The filler shall be located as close to the center of the reservoir as possible and still be easily accessible.
- 9.8.4 Removable 100 mesh suction strainer rated for proper flow.
- 9.8.5 Sight gauge with built in temperature indicator, clearly visible from the ground.

- 9.8.6 A nonrestrictive ball valve on the suction line between the suction strainer and the suction hose.
- 9.8.7 A magnetic drain plug at the bottom of the reservoir. A magnetic removable rod may be used in conjunction with a standard drain plug in the bottom of the tank.
- 9.8.8 The tank shall be equipped with a minimum of one (1) center baffle. The baffle will allow oil to flow around the bottom corners and top. The suction and return ports will be on opposite sides of the baffle. Baffle welds are not to be ground.
- 9.8.9 The standard return line filter is to be a tank top. "Parker" immersed style sized properly for flow.
  - a. An alternative spin on style return filter may be used. The filter head shall be mounted on a dedicated mounting bracket and positioned in such a way that it is protected from damage but accessible for maintenance. Filters hanging off the tank via a pipe nipple are not acceptable. List price in crease/deduction for a spin on style filtration system...... NB

- b. The filtration rating shall be 10 micron nominal with a minimum flow rating of twice the pump flow. The filter outlet is to have a downcomer installed if necessary, so that oil is discharged into the tank below the oil level when all the cylinders are in the extended position. Filter restriction indication shall be provided. The gauge provided shall be located to be easily readable.
- The reservoir shall be thoroughly cleaned to remove any 9.9 weld slag or manufacturing debris. If a piston pump is specified the reservoir is to be sloshed with Randolph 912 Sloshing Compound or Automotive Engineer approved equivalent.
- 9.9.1 The reservoir shall be hydrostatically pressure tested at 3 to 5 PSI with no leaks to be allowed.
- 9.9.2 All mounting hardware shall be grade 5 minimum either zinc plated steel or stainless steel. Locking nuts are required, Split "lock" washers are not acceptable.
- 9.9.3 List pricing to build hydraulic reservoir(s) per reference drawing in attachment #4

b.	20 gallon aluminum:\$	NB
	30 gallon steel:\$	
d.	30 gallon aluminum:\$	NB
	40 gallon steel\$	
	40 gallon aluminum:\$	
g.	50 gallon steel\$	NB
	50 gallon aluminum:\$	

#### 10.0 PAINT:

- 10.1 Paint shall be Dupont Imron 5000 Polyurethane or Automotive Engineer approved equivalent. The color is to be determined by the Fleet Services Engineer. Standard white is N0010, dump box color is to be gray number N0428, Parks color is N0105 Green, other colors will be used.
- 10.2 The surface shall be prepped, cleaned and washed with industry standard cleaning solvent.
- 10.3 Two (2) coats of self etching primer shall be used.

# 11. Complex Electrical/Hydraulic System Schematic Requirements:

 At the discretion of the Automotive Engineer overseeing the project, electrical and/or hydraulic schematics may be required as follows.

# 11.1 SCHEMATICS:

11.2 Three (3) each, engineering schematic drawings of the electrical and/or hydraulic systems are required. The schematics shall be a minimum of 11 x 17 inches in size, easily readable and Mylar coated.

## 11.3 The electric schematic shall include:

- SAE electric symbols shall be used to identify all components.
- All interfaces between OEM wiring and added equipment shall be shown to include electrical pin positions as arranged in the interface connections.
- All wire color coding and/or wire numbers shall be displayed to indicate different circuits.
- d. Electrical circuits may be shown individually as long as all circuits are included.

# 11.4 Hydraulic Schematics

11.4.1 The hydraulic schematic are required and shall include when applicable:

- a. ANSI or JIC fluid power graphical symbols for all components.
- All major components, such as pumps, cylinders and motors, shall be identified with their function and size.
- 11.5 Upon request an electronic version of the schematics in AutoCAD viewable format are to be submitted to the Automotive Engineer for approval.

# 12. WARRANTY:

- 12.1 Bidder shall have a full time, complete local (within 75 mile radius of FFD shops located at 805 South Charles Street, Seattle, Washington 98134) parts and service facility offering factory authorized service and a parts supply adequate to perform complete warranty repairs.
- 12.2 Inspection of bidder's parts and service facility shall be required before award of bid is made.
- 12.3 Manufacturer's standard warranty shall be a minimum of 12 months and commence the date equipment/vehicle is placed in service, not delivery date, as documented by the City of Seattle. State warranty offered.
- 12.4 All warranty documentation shall be delivered with each vehicle.
- 12.5 Warranty service, extended warranty and recall work must be performed by seller or seller's service facility, who must accept responsibility for all transportation. Seller must respond to a call for warranty service within 24 hours. All costs of warranty repair and service shall be born by the seller.
- 12.6 Minor warranty repairs than can be done in one (1) hour or less shall be performed by the City of Seattle FFD repair shop. In the event a covered repair will take more than one (1) hour, the City of Seattle FFD shop will call the vendors assigned contact person for repair authorization or have the vendor pick up the truck for repairs. All warranty repairs completed by The City of Seattle FFD shop will be reimbursed by the vendor at the current shop hourly rate. The current shop hourly rate is \$71.50 per hour for the fiscal year of 2005. The

shop rate is adjusted annually to compensate for inflation and shop overhead costs. The City of Seattle FFD shop will only bill for actual time spent. There will be no minimum time charge on any repair. All warranty transportation will be provided by the vendor.

12.7	List official	warranty	authorization	representative.
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# 13. VISITS AND PROJECT MANAGEMENT:

- 13.1 The bid price submitted shall include:
  - a. The unit may be inspected at any time during construction by the Automotive Engineer.
  - All end-user (operator) visits shall be scheduled thru the Automotive Engineer.
  - Unscheduled visits by the end-user shall be discouraged.
  - d. Any and all changes, clarifications or change orders must be authorized by the Automotive Engineer in writing.
  - e. All costs for travel meals and lodging associated with the above mentioned specification reviews, and/or construction progress inspection trips shall be borne by City of Seattle if within the greater Seattle area. Beyond the Seattle area all such costs will be paid by the contractor. (Any travel that takes more than 2.5 hours in travel time each way.)
  - f. The vendor must have the capability to send digital images. These digital images will be used via E-Mail for up-fitting clarifications and/or authorizations by the Automotive Engineer assigned to the project

## 14. GENERAL REQUIREMENTS

- 14.1 All equipment and components necessary for operation and normally supplied shall be furnished, even if not called out in the specifications.
- 14.2 Vendor shall provide all shuttling of vehicles/chassis within 36 hours from notification by the Automotive Engineer assigned to the project.
- 14.2.1 All equipment shall have full dealer preparation and be ready for service when delivered.

- 14.3 Four (4) complete sets of keys for all locks shall be provided with the unit. (Not to include City of Seattle supplied equipment)
- 14.4 A spare filter set shall be supplied with the completed unit. The set shall consist of all filter elements required for all filters installed. (If applicable)
- 14.5 Vendor decals if applied shall be no larger than 4" x6" in size and there shall be no more than 2. Mud flap logos are acceptable.
- 14.6 Equipment shall be delivered to:

FFD Shops 805 South Charles Street Seattle, WA 98134

- 14.7 Vehicle Configurations #1 thru #12 will be delivered to the Charles Street Capitalization shop. Attn. Nancy Bean Phone # 206-386-1161
- 14.8 Vehicle Configurations #13 thru #14 will be delivered to the Charles Street Truck shop. Attn. Jerry Briggs Phone # 206-386-1153

# \*\*\*\* IMPORTANT \*\*\*\*

The manufacturer's local representative must print the representative's firm name, address, phone number and the VIN number on all written warranty statements and/or manuals. VIN numbers furnished must match the respective item numbers on the contracts. Additionally, all such warranty instruments must be complete with all manufacturer/dealer responses contained therein (typewritten or neatly printed in ink, no exceptions) before acceptance of the vehicle/equipment will be made.

Price Changes in future contract years shall be in accordance with the specifications.

**Prompt Payment Discount**: 0 %\_\_\_\_\_ days. Note: Prompt payment discount periods equal to (or greater than) 10 calendar days will receive consideration and bid pricing will be reduced for evaluation by the amount of that discount.

Specify if this is an ALL OR NONE BID: Yes No: X

Specify if the Business is located within the Seattle City Limits:

Businesses located and licensed within the Seattle City limits are eligible for Seattle tax consideration for purposes of calculation of low bid. This shall be equivalent to a reduction of the cost for purposes of bid evaluation only, of .019.

# ITEMS REQUIRED

Yes:	$\mathbf{X}$	No:	

COMPANYNELSON TRUCK EQUIPMENT(Name)	206-365-1000 (Phone)
NAMEPERRY VANASSE(Print)	TERRITORY MANAGER (Title)
I have read and understand the above specifications	
SIGNATURE The Man	09/20/05 (Date)

Body Outfitting Multi-Year Contract

Date updated- 05-17-2005